

ZOOPHYTOLOGY.

DESCRIPTIONS of NEW POLYZOA from IRELAND.

By REV. THOMAS HINCKS, B.A.

THE new species of Polyzoa which are described in this paper have been obtained from material dredged in deep water, off the coast of Antrim, by Mr. Hyndman of Belfast, whose researches, as a member of the North of Ireland Dredging Committee, appointed by the British Association, have yielded so many valuable results.

Sub-order CHEILOSTOMATA.

Fam 1. MEMBRANIPORIDÆ.

Gen. 1. *Membranipora*.1. *M. imbellis*, n. sp., Hincks. Plate XXX, fig. 1.

Cells ovate, broad below, with a membranous covering (no calcareous expansion); margin raised, much thickened, and beaded. Ovicell very prominent, frosted, with a raised edging round the front. No spines nor avicularia.

The examination of a large number of specimens from various localities, exhibiting a striking uniformity of character, has convinced me that this form should be accounted a species, and that it is not a mere variety of *M. Flemingii*.

I have never detected, even in the youngest and freshest specimens, any trace of spines or avicularia. The polyzoary is generally dull and opaque, and coarse in texture.

The size and distinctness of the cells, the absence of the calcareous expansion, the shape of the ovicell, and the want of spines and avicularian appendages are constant characters, which separate this species from *M. Flemingii*.

Common on shell, &c. Coast of Antrim, *Mr. Hyndman*; Scotland (west coast); Devon.

Gen. 2. *Lepralia*.1. *L. alba*, n. sp., Hincks. Plate XXX, figs. 2, 2 a.

Cells sub-ovate, broad, somewhat depressed, granular; mouth rounded above, lower margin straight, with a notch in the centre; an avicularium on each side, about half-way down the cell; mandible acute, pointing upward.

Ovicell small, depressed, closely united to the cell above, surface finely granular.

On shell, coast of Antrim.

2. *L. ezimia*, n. sp., Hincks. Plate XXX, figs. 3, 3 a.

Cells large, ovate, distinct, granular, punctured round the margin; mouth sub-quadrated, with a raised peristome, rising into a point at each side, a broad, rounded denticle within the lower margin. Ovicell globose, prominent, punctured.

This fine species grows in irregular, lobulate patches. My specimens exhibit neither spines nor avicularia.

On shell, coast of Antrim.

3. *L. discoidea*, Bk. Plate XXX, figs. 4, 4 a.

Cells in straight radiating series; immersed at the base, sub-erect above; surface punctured frosted; orifice small, suborbicular, with a sinus below, peristome raised; 4 to 6 marginal spines above; an avicularium on one or both sides of the cell; mandible elongated linear, obtuse, directed downwards and outwards. Ovicell recumbent, punctured, its sides prolonged, so as to surround the mouth.

Hab.—Antrim, on shell, *T. Hincks*; Madeira, *J. Y. Johnson*; Shetland, *Barlee*.

This species has been figured twice already in former parts of Zoophytology, but on both occasions from specimens in which the true characters were not displayed.

An amended character, therefore, and a more correct representation of the perfect form, is now given. Having been furnished by Mr. Busk with specimens of the same species, recently received by him from Madeira, through the kindness of Mr. J. Y. Johnson, I am fully satisfied of the identity of the Madeiran and Irish forms.

The characters above assigned are usually to be found only on the marginal cells of the patch, which are also in many cases double the size of the older or more central cells; in the latter also the peculiar avicularia are almost invariably wanting, being replaced in most instances by a single, smaller, imperfect avicularium, placed rather to one side on the front of the cell immediately below the mouth. But it is very often the case that this organ is wholly wanting, when the species presents the aspect under which it was formerly depicted.

4. *L. Woodiana*, Busk.

This species has been lately described and figured by Mr. Busk in his 'Monograph on the Polyzoa of the Crag' (p. 42, pl. vii, figs. 1 and 3), and was only known as a fossil, previous to its occurrence amongst Mr. Hyndman's Antrim dredgings. From this rich material I have obtained one or

two specimens on shell, which correspond in all respects with Mr. Busk's figure. *L. Woodiana* must, therefore, take its place as a member of our recent Fauna.

Fossil.—Coralline Crag (*Searles Wood*).

Recent.—Coast of Antrim; ? Madeira, *J. F. J.*

There is every probability that many more of the Crag forms may be obtained by careful investigation, and those who may have opportunities of dredging, especially in deep water, should be on the look-out for them. Mr. Busk's admirable Monograph, published by the Palæontographical Society, affords a ready means of identifying the species.*

5. *Lepralia Landsborovii*, Johnston.

The description of this species in the 'British Zoophytes' was founded on a single specimen, supplied by Dr. Landsborough, which is preserved in the British Museum. This specimen is old and worn and by no means characteristic, and it is not surprising that Dr. Johnston's diagnosis should have been so imperfect and unsatisfactory. Much difficulty has been experienced in determining what form he had in view, and there has been more than one claimant for the honour of bearing the name.

In his 'Catalogue,' Mr. Busk has given a very admirable figure (pl. cii, fig. 1) of the veritable *L. Landsborovii*, but has referred it to *L. reticulata*. A comparison of the form represented in this figure (which I have procured abundantly) with Dr. Johnston's specimen, has satisfied me of their identity.

The following is an amended description of the species :

Lepralia Landsborovii, Johnston, Brit. Zooph., 2d edit., p. 310.

„ „ Busk, Catalogue of Brit. Mus. Polyzoa, part ii, page 66, plate lxxxvi, fig. 1 (taken from the Brit. Mus. imperfect specimen); plate cii, fig. 1 (referred to *L. reticulata*).

Cells ovate-elongate, separated by raised lines; surface lustrous, thickly covered with punctures; mouth circular, a denticle within the lower margin, peristome raised, with a spout-like sinus below, enclosing a small avicularium, with a rounded mandible. Ovicell globular, prominent, punctured.

* Since the above was written, Mr. Busk has furnished me with specimens of a new Madeiran *Lepralia*, so closely resembling *L. Woodiana* in all essential characters, that I am strongly inclined to agree with him that the two are identical. Thus is added another link to the already numerous ones connecting the southern and western and north-western British Polyzoa, with those belonging to the Mediterranean Fauna, and to that of the Crag.

Dr. Johnston has accurately described the walls of the cells as "thin, glassy, and hyaline, thickly dotted with small perforated granules." In fresh specimens there is a silvery sheen over the surface of the polyzoary. The *avicularium* is placed within the projecting, spout-like sinus, into which the peristome is prolonged below, and behind it is a single denticle. The mandible of the avicularium is rounded.

The *ovicell* is globose and punctured, and the sides of the opening uniting with the peristome give a hooded appearance to the cells on which it is developed.

My finest specimens of this *Lepralia* were dredged off the Great Orme's Head on the coast of North Wales, and were some compensation for the general barrenness of the ground. It occurred here in great abundance, commonly encrusting masses of the sand-tubes belonging to a species of *Sabella*. Over these it spread luxuriantly in large, sub-circular, and glistening patches, occasionally rising into foliaceous expansions. I have also met with it in Devonshire, and amongst Mr. Hyndman's dredgings from the coast of Antrim.*

Fam. 2. CELLEPORIDÆ.

Gen. 1. *Cellepora*.

1. *C. armata*, n. sp., Hincks. Pl. XXX, fig. 5.

Polyzoary adnate, spreading; cells smooth, sub-erect (except towards the margin of the polyzoary), ventricose, distinct; orifice orbicular, slightly produced below, peristome thin and raised; a stout rostrum in front, with an avicularium at one side, immediately below the apex, mandible acute and pointing upward; large spoon-shaped avicularia distributed over the polyzoary, in the intercellular spaces. Ovicell smooth; walls entire.

In this species, the avicularium is placed at the top of the rostrum, looking to one side. The broad triangular mandible points upward. The rostrum is much stouter and more obtuse than in *C. pumicosa*.

Localities.—Coast of Antrim, on shell, Mr. Hyndman; Dogger Bank and South Devon, T. H.; Madeira, J. Y. J., 1860.

2. *C. avicularis*, n. sp., Hincks.

A *Cellepora* occurs in considerable plenty on Zoophytes from Ireland, which seems to be undescribed.

The following are its characters:

Polyzoary encrusting or spreading, variable in its mode of growth; cells ovate, ventricose, smooth; orifice orbicular, with a deep sinus in

* *Vide* Report of Belfast Dredging Committee, in the British Association volume for 1858, p. 293.

front, a short, conical rostrum below the mouth, with an avicularium, set obliquely, near the top of it, mandible acute; in fertile cells, a process on each side, just below the ovicell, and attached to it, bearing an oval (?) avicularium. Ovicell prominent, with large punctures, somewhat semi-circularly disposed. Spatulate avicularia thickly scattered amongst the cells.

Occasionally there occurs on the polyzoary a very stout, conical rostrum, bearing a large avicularium, with broad, triangular mandible.

Localities.—Ireland, encrusting stems of Zoophytes, &c.

Sub-Order CYCLOSTOMATA.

Fam. I. TUBULIPORIDÆ.

Gen. *Alecto*.

1. *A. incurvata*, n. sp., Hincks. Plate XXX, fig. 6.

Polyzoarium adnate, linear, curved, tapering; cells biserial, alternate, bent towards the side, orifices opening out laterally; surface obscurely punctate.

Polyzoarium closely adnate, narrow, unbranched, more or less attenuated towards the point of origin; the cells are biserial and alternate (except towards the base of the polyzoary, where they form a single row), and separated by a median line; they bend towards the side, and project a little beyond the polyzoary, the orifices opening out laterally.

On stones, coast of Antrim (deep water), not uncommon.

The Antrim dredgings have yielded a large number of the *Cyclostomata*, belonging to the genera *Tubulipora* and *Alecto*, which I am obliged to reserve for future examination.

Sub-Order CTENOSTOMATA.

Fam. VESICULARIDÆ.

Gen. *Farrella*.

1. *F. dilatata*, n. sp., Hincks. Plate XXX, fig. 7.

Cells tubulous, sessile, stout, of equal size throughout, opaque, springing from one extremity of a fusiform expansion of the fibre, which is closely adherent, and set round with a number of flattened, spinous projections.

In this species the delicate, creeping fibre swells out here and there into cell-like expansions, fusiform, adherent, and furnished with a variable number of flattened, spinous processes. The cells spring from the larger end of these swellings. They are stout, sessile, and not contracted at the base, and of a dark, horn colour when dried. The clavate and spinous expansions are analogous to the cell-bearing enlargements of the fibre in *Ætea*.

Isle of Man, on shell, *T. H.*; Antrim, deep water, *Mr. Hyndman*.
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In the 'Belfast Dredging Com. Report' for 1858, I have recorded this species as *Avenella dilatata*. But the *Avenella* of Sir John Dalycell is a very doubtful genus, and I prefer, for the present, to refer it to *Farrella*, as defined by Mr. Busk, in the 'Micr. Journal,' vol. iv, p. 93.

II. CATALOGUE of the POLYZOA collected by J. Y. JOHNSON, Esq., at MADEIRA, in the years 1859 and 1860, with descriptions of the NEW SPECIES. By G. BUSK, F.R.S.

I. CHEILOSTOMATA.

Fam. 1. CATENICELLIDÆ.

Gen. 1. *Catenicella*, Blainv.

1. *C. elegans*, Bk.

Hab.—Madeira, on fishermen's baskets, abundant, *J. Y. J.*; (?) Mediterranean, *Savigny*; South Africa; Australia; New Zealand.

Fam. 2. SALICORNARIIDÆ, Bk.

Gen. 2. *Salicornaria*, Cuv.

1. *S. Johnsoni*, Bk.

Hab.—Madeira, *J. Y. J.*; Shetland, *Barlee*.

Fam. 3. CELLULARIIDÆ, Bk.

Gen. 3. *Scrupocellaria*, Van Beneden.

1. *S. Maderensis*, n. sp.

Cellulis elongatis; aviculario parvo; orificio ovali, peristomate simplici glabro; operculo suborbiculari glabro integro; spinis marginalibus sex, equidistantibus; ovicellulâ glabrâ non punctatâ.

Cells elongated; avicularium small; orifice oval, peristome simple, not granular; pedunculate operculum sub-orbicular, smooth, entire; six equidistant marginal spines above; ovicell smooth, not perforated.

Hab.—Madeira, *J. Y. J.*

This species differs from *S. pilosa*, Audouin (sp.), in several respects. 1st. In the form of the cell, which in that species is represented as elongated, and of nearly equal diameter throughout, especially as viewed on the dorsal aspect. 2dly. In the disposition of the marginal spines, which in *S. pilosa* are depicted as four on the upper and outer margin, and a single one some distance apart on the inner border of the orifice. 3dly. In the ovicell, which in *S. pilosa* appears to be perforated. They agree somewhat in general aspect, in